



longitudinal direction especially by temperature changes and humidity, such as heat treatment in a painting process, or \*\*\*\*\*. A masking material shifts from a masking part according to such modification, and this masking part is no longer certainly protected by the masking material, and the reuse of this masking material becomes impossible.

[0003]

[Description of the Prior Art]Then, as conventionally shown in drawing 13, it is a front bumper (2). Air-intake (4) Processed material [ like ] (1) The shape which suits a masking part, Masking material (5) which consists of two or more units (6, 7) divided into the prescribed number by the longitudinal direction It is provided (JP.8-24734.A). This masking material (5) This front bumper (2) Air-intake (4) In order to equip, as it is shown in drawing 14, it is this masking material (5). As both units (6, 7) overlap a little, it is adhesive tape (8). It connects. Thus, it is this air-intake (4) by this masking material (5). It paints, after protecting. This masking material (5) Although a unit (6, 7) changes into a longitudinal direction (transverse direction) especially by humidity, such as a temperature change by heat treatment of a painting process etc., and \*\*\*\*\*. Since this unit (6, 7) is divided by a longitudinal direction and it is short, deformation becomes small, Even when it is absorbed by change of the width of the lapped part (5A) between [ this ] units (6, 7) and change is produced in the shape of a masking material according to expansion, the heat modification besides \*\*\*\*\* etc. in the last use, an intermittent periodic duty becomes possible by sliding on it and adjusting a lapped part.

[0004]

[Problem(s) to be Solved by the Invention]however, the above-mentioned conventional masking material (5) if it is -- after paint -- air-intake (4) from -- when removing, it is shown in drawing 11 -- as -- lower unit (6) a connection end -- this air-intake (4) hitting -- this air-intake (4) There was a problem referred to as

damaging.

[0005]

[Means for Solving the Problem]As above-mentioned conventional The means for solving a technical problem, this invention is a processed material (1). Masking part (4) Two or more units (16, 17) which divided suiting shape into a prescribed number by a longitudinal direction are connected with a connecting belt (18), A masking material (15) which covered a unit connection end of one side or both with a cushion sheet (19) is provided.

[0006]

[Embodiment of the Invention](1) will be the body of a car if one example shown in drawing 1 - drawing 11 explains this invention, Paint is faced and it is a front bumper (2). Air-intake (4) of a lower skirt part (3) Center pillar (6) Side sill (7) A masking material (15, 20, 25) is attached. it is shown in drawing 2 -- as -- this skirt part (3) Air-intake (4) reinforcement inside in every direction -- the crosspiece (4A, 4B) being provided and, This masking material (15) is halved by the unit (16, 17) by a longitudinal direction, each unit (16, 17) -- this reinforcement -- the fitting groove (16A, 16B, 17A, 17B) in every direction for fitting in a crosspiece (4A, 4B) is formed, and also the adhesive layer (16C, 17C) is formed in the peripheral surface. And it connects by pasting up connecting belts, such as adhesive tape (18) or a fabric tape, with adhesives, as are shown in drawing 2, and this unit (16, 17) is overlapped a little [ mutual ], To the connection end of a lower unit (16), crude rubber and a styrene butadiene rubber, An acrylonitrile butadiene rubber, chloroprene rubber, ethylene-propylene rubber, The sheet of synthetic rubbers, such as polyisoprene rubber and isoprene isobutylene rubber, The foam sheet of the above-mentioned crude rubber or a synthetic rubber, polyethylene, polypropylene, The foam sheet of thermoplastics, such as polyvinyl chloride and polyvinyl acetate, The cushion sheet (19) which consists of fibrous sheets, such as a

foam sheet of thermosetting plastic, such as urethane resin, phenol resin, melamine resin, urea resin, resorcinol resin, and an epoxy resin, a nonwoven fabric, and felt, etc. is laminated. The masking material (15) which connected this unit (16, 17) as shown in drawing 3 is attached inside this air-intake (4), it is shown in drawing 4 and drawing 5 -- as -- this air-intake (4) reinforcement -- a crosspiece (4A, 4B) is fitted into the fitting groove (16A, 16B, 17A, 17B) of each unit (16, 17). And this masking material (15) is this air-intake (4) by the adhesive layer (16C, 17C) of each unit (16, 17). It is fixed inside.

[0007]As shown in drawing 6, it is a center pillar (6). A masking material (20) is halved by the unit (21, 22) by a longitudinal direction. The main part of each unit (21, 22) is the type of section KO, and it is this center pillar (6) in these main part edges on both sides. The fitting groove (21A, 21A, 22A, 22A) for fitting in bends the flange (6A, 6A) currently formed in edges on both sides, and it is formed, The reinforcing rib (21B, 22B) is formed. As shown in drawing 7 and drawing 8, each unit (21, 22) of this masking material (20) is connected with adhesive tape (23), as it overlaps mutually a little, and a cushion sheet (24) is laminated on the connection end of a lower unit (21). And the masking material (20) which did in this way and connected both units (21, 22) is a center pillar (6), as shown in drawing 9. It fits in outside, This center pillar (6) It is fixed by fitting a flange (6A, 6A) into the fitting groove (21A, 21A, 22A, 22A) of each unit (21, 22).

[0008]it is shown in drawing 10 -- as -- side sill (7) of the body (1) \*\*\*\*, although a masking material (25) is attached, This masking material (25) is halved by the unit (26, 27) by a longitudinal direction, as each unit (26, 27) overlaps mutually a little, it is connected with adhesive tape (28), and a cushion sheet (29) is laminated on the connection end of a lower unit (26). The masking material (25) which

connected this unit (26, 27) is this side sill (7) by a magnet (30, 30). It is fixed. This magnet (30, 30) is attached to the outer edge twist of each unit (26, 27).

[0009] Thus, it is the body (1) after attaching a masking material (15, 20, 25) to each masking part (4, 6, 7). It paints and dry hardening of the coat is carried out by paint stress relief heat treatment. Although the unit (16, 17, 21, 22, 26, 27) of each masking material (15, 20, 25) mainly changes into a longitudinal direction by the temperature change and humidity by heat treatment, It is absorbed by change of the width of the unit lapped part (15A, 20A, 25A) of each masking material (15, 20, 25), and the appearance length of each masking material (15, 20, 25) does not change. Each masking material after heat treatment (15, 20, 25) is removed from each masking part (4, 6, 7). In this case, even if the connection end of a lower unit (16) contacts a part (air-intake (4)) to be masked as shown in drawing 11 when the connection end of the unit (16, 21, 26) of each masking material (15, 20, 25) bottom is a masking material (15), Since the connection end of each masking material (15, 20, 25) is covered with the cushion sheet (19, 24, 29), a part to be masked is not damaged by this connection end edge. Even after each masking material (15, 20, 25) changes by adjusting the width of a unit lapped part (15A, 20A, 25A), a reuse is possible for it.

[0010] The above-mentioned masking material (15, 20, 25), for example Polystyrene, polyethylene, Polypropylene, ethylene propylene rubber, polyvinyl chloride, The sheet of thermoplastics, such as a vinylidene chloride copolymer and an ethylene-vinylacetate copolymer, or the sheet of the foam of this thermoplastics, Or polyurethane, melamine resin, urea resin, phenol resin, The sheet of thermosetting plastic, such as an epoxy resin, or the sheet of the foam of this thermosetting plastic, Or polyamide (PA), polyacetal (POM), polycarbonate (PC), Glass fiber

strengthening polyethylene terephthalate (GF-PET), polybutylene terephthalate (PBT), Polyphenylene ether (PPE), polyphenylene oxide (PPO), Polysulfone (PSF), polyether sulphone (PES), a polyphenylene sulfide (PPS), Polyarylate (PAR), a polyether ether ketone (PEEK), crystalline polyester, polyamidoimide (PAI), polyimide (PI), polyether imide (PEI), polyamino bismaleimide, a methylpentene copolymer (TPX), Liquid crystal types, such as thermoplastic types, such as cellulose acetate (CA), and polyallyl ether, Compression-molding type [ , such as a fluoro-resin, ], amorphous polymer, and polyamino bismaleimide, Engineering plastics, such as bismaleimide triazine series heat-curing type aromatic polyimide, Or styrene butadiene, acrylonitrile styrene butadiene, The sheet of synthetic rubbers, such as an acrylonitrile butadiene rubber, and crude rubber, or the sheet of the foam of these rubbers, Or synthetic fibers, such as a polyamide fiber, polyester fiber, acrylic fibers, and an acetate fiber, Woody fiber, a natural fiber, inorganic fibers and these nonwoven fabrics, and a knit fabric, paper, It is a Plastic solid which consists corrugated paper, a bamboo, a tree, a plywood, hardboard, etc. of the impregnation sheet impregnated with binders, such as polyurethane, melamine resin, urea resin, and phenol resin, a metal sheet, or two or more sorts of laminated material of said material.

[0011] Although there are said heat-resistant outstanding engineering plastics as a desirable material of the above-mentioned masking material, In order to give a good moldability and flexibility to these engineering plastics, To these engineering plastics, for example, polyethylene, polypropylene, Ethylene propylene rubber, an ethylene-vinylacetate copolymer, polyvinyl chloride, A polyvinylidene chloride, polystyrene, polyvinyl acetate, a fluoro-resin, A thermoplastic acrylic resin, thermoplastic polyester, thermoplastic polyamide, Thermoplastic urethane resin, an

acrylonitrile butadiene copolymer, a styrene butadiene copolymer, Acrylonitrile-butadiene-styrene copolymer, ethylene propylene rubber, There is a polymer alloy with said engineering plastics which mixed thermoplastics, such as an ethylene-propylene terpolymer and an ethylene-vinylacetate copolymer, As the above-mentioned polymer alloy, for example, a PPO-high-impact-polystyrene polymer alloy, a PPO-polyamide polymer alloy, a PPO-polyamide high-impact-polystyrene polymer alloy, a PPO-polyamide polystyrene polymer alloy, A PPO-PTFE polymer alloy, PE-high-impact-polystyrene polymer alloy, PE-polyamide polymer alloy, a polyamide denaturation polyolefine polymer alloy, Polyamide acrylonitrile / styrene / butadiene copolymer (ABS) polymer alloy, A polyamide PTFE polymer alloy, a POM-thermoplasticity polyurethane polymer alloy, A PBT-acrylic rubber polymer alloy, a PBT-ABS polymer alloy, A PBT-polyester ether elastomer polymer alloy, a PBT-PET polymer alloy, A PBT-PC polymer alloy, a PBT-PTFE polymer alloy, a PET-PTFE polymer alloy, There are a PET-PAR polymer alloy, a PC-PTFE polymer alloy, a PAR-PTFE polymer alloy, etc., As a desirable polymer alloy, there is a polymer alloy of PPO, polyamide, and polystyrene, a polymer alloy of PPO, polyamide, and high impact polystyrene, or a PPO-polyamide polymer alloy especially. As polyamide used for a polymer alloy with the above PPO, For example, polytetra ethylene adipamide (nylon 4:6), polyhexamethylene adipamide (nylon 6: 6), Poly PIROSODON (nylon 4), polycaprolactam (nylon 6), Poly hept lactam (nylon 7), the Pori Capri lactam (nylon 8), Polynonanolactam (nylon 9), polyundeca 1 lactam (Nylon 11), Polydodeca 1 lactam (Nylon 12), polyhexamethylene azelain amide (nylon 6: 9), Polyhexamethylene sebacamide (nylon 6: 10), polyhexamethylene phthalamide (nylon 6: iP), Polyhexamethylene terephthalamide,

polyhexamethylencisophthalamide, Polytetramethylene isophthalamide, polymeta xylene adipamide (nylon MSD:6), Hexamethylenediamine, the polyamide (nylon 6: 12) of n-dodecanedioic acid and dodecamethylenediamine, the polyamide (Nylon 12: 12) of dodecanedioic acid, hexamethylene adipamide/caprolactam (nylon 6: 6/6), Hexamethylene adipamide / hexamethylene isophthalamide (nylon 6: 6/6iP), Hexamethylene adipamide / hexamethylene terephthalamide (nylon 6: 6/6T), A trimethylhexamethylene oxamide / hexamethylene oxamide (nylon trimethyl 6:2/6:2), Hexamethylene adipamide / hexamethylene -\*\*\*\* ryc amide (nylon 6: 6/6:9), Hexamethylene adipamide / hexamethylene -\*\*\*\* ryc amide / caprolactam (nylon 6: 6/6:9/6), Poly (KAPURO amide / hexamethylene SEBAKAMIDO) (nylon 6: 610), Poly (KAPURO amide / hexamethylene DODEKAMIDO) (nylon 6: 612, Nylon MXD 6), There are poly (KAPURO amide / hexamethylene isophthalamide) (nylon 6: 6I), aromatic polyamide, etc., and they are nylon 6, Nylon 11, Nylon 12, Nylon 66, Nylon 46, etc. as especially desirable polyamide.

[0012]To the polymer alloy of the above-mentioned engineering plastics, engineering plastics, and thermoplastics, further Acrylic rubber (AR), Isobutylene isoprene rubber, silicon rubber, urethane rubber (UR), fluoride system rubber, Polysulfide rubber, graft rubber, butadiene rubber (BR), polybutadiene, Polyisoprene rubber (IR), polyisoprene, chloroprene rubber (CR), Polyisobutylene rubber (IBR), polybutene rubber, a Thiokol rubber, Polysulfide rubber, polyether rubber, epichlorohydrin rubber, a norbornene terpolymer, Hydroxy \*\* Carboxy-terminus denaturation polybutadiene, a partially-hydrogenated styrene butadiene block copolymer, The Krol sulfonation rubber, isobutene-polyisoprene rubber (IIR), acrylate butadiene rubber (ABR), A styrene butadiene rubber (SBR), an acrylonitrile butadiene



rubber (NBR), Pyridine- butadiene rubber, styrene polyisoprene rubber (SIR), a styrene ethylenic copolymer, polystyrene polybutadiene polystyrene (SBS), polystyrene polyisoprene polystyrene (SIS), Poly (alpha-methylstyrene)-polybutadiene poly (alpha methylstyrene) (alpha-MeSB alpha-MeS), Poly (alpha methylstyrene)-polyisoprene poly (alpha-methylstyrene), Ethylene propylene rubber (EP), Butadiene Styrene (EP), An ethylene-propylene-ethylidene copolymer, an ethylene-propylene-diene copolymer, Ethylene propylene rubber rubber, ethylene-butene-1 copolymer rubber, Ethylene-propylene-ECIRUDIN norbornene copolymer rubber, ethylene-propylene-dicyclopentadiene copolymer rubber, Ethylene-propylene-1,4 hexadiene copolymer rubber, ethylene-butene-1-ethylidene norbornene copolymer rubber, Ethylene-butene-1-dicyclopentadiene copolymer rubber, ethylene-butene-1-1, 4 hexadiene copolymer rubber, Acrylonitrile chloroprene rubber (NCR), styrene chloroprene rubber (SCR), a styrene butadiene styrene (SBS) copolymer, a styrene isoprene styrene (SIS) copolymer, Styrene thermoplastic elastomers and butadiene styrene block copolymers, such as a styrene hydrogenation polyolefine styrene copolymer (SEBS), The masking material with which synthetic rubbers, crude rubber, etc., such as block copolymers, such as a styrene rubber middle block styrene copolymer, were added is a more desirable material.

[0013]When the above-mentioned thermoplastics adds 1 to 200 % of the weight and a synthetic rubber, or an elastomer among the above-mentioned polymer alloy in this invention, it is added about 1 to 150% of the weight among the above-mentioned engineering plastics or the above-mentioned polymer alloy. When a bulking agent is added, it is added about 1 to 200% of the weight among the above-mentioned polymer alloy.

[0014]To the above-mentioned masking material, calcium carbonate, magnesium carbonate, barium sulfate,

Calcium sulfate, calcium sulfite, calcium phosphate, calcium hydroxide, Magnesium hydroxide, aluminium hydroxide, magnesium oxide, titanium oxide, Iron oxide, a zinc oxide, alumina, silica, diatomaceous earth, dolomite, gypsum fibrosum, Talc, clay, asbestos, mica, glass fiber, a calcium silicate, Ben Knight, white carbon, carbon black, iron powder, aluminium powder, Inorganic bulking agents, such as silica flour, blast furnace slag, fly ash, cement, and zirconia powder, Natural fibers, such as cotton, a bamboo, hemp, and wool, a polyamide fiber, polyester fiber, Acrylic fibers, viscose textiles, an acetate fiber, VCM/PVC textiles, Organic synthesis textiles, such as a vinylidene chloride, an asbestos fiber, glass fiber, Inorganic fibers, such as carbon fiber, ceramic fiber, a metal fiber, and a whisker, linters, Add and reinforcing members, such as organic fillers, such as linen, sisal, wood flour, coconut powder, walnut powder, starch, and wheat flour, shape retentivity, May make dimensional stability, compression, tensile strength, etc. improve, and Fire retardant, a flame proofing agent, an insecticide, an antiseptic, waxes, lubricant, an antiaging agent, an antioxidant, an ultraviolet ray absorbent, Kinds, such as plasticizers, such as colorant, such as foaming agents, such as a spray for preventing static electricity, a crystallization accelerator, a chemical foaming agent, and a capsule type foaming agent, a color, and paints, DOP, and DBP, or two sorts or more may be mixed.

[0015]The method of fabricating in the shape which suits manufacturing the masking material of this invention mainly by vacuum forming, press forming, blow molding, etc. in the above-mentioned material at the shape of a masking part, or the method of manufacturing the pellet of the above-mentioned material by casting, injection molding, etc. in the above-mentioned shape is taken. A binder may be applied all over some masking materials if needed. The connection end of the unit of a masking material

may laminate a cushion sheet also on an upper thing, although a cushion sheet is laminated mainly on a lower thing.

[0016]

[Effect of the Invention]Therefore, since the length of the appearance of a masking material does not change and this masking material does not shift from a part to be masked by temperature or humidity, such as a painting process, in this invention, Also when this part to be masked is certainly protected by this masking material and a masking material is removed, a part to be masked is not damaged by a masking material.

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[Translation done.]